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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,149	06/08/2006	Friedhelm Schmitz	2003P08284WOUS	8840

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SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER

LAVILLA, MICHAEL E

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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06/27/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,149	Applicant(s) SCHMITZ ET AL.	
	Examiner Michael La Villa	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006 (Preliminary Amendment).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060608</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The Substitute Specification filed on 8 June 2006 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
3. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 19-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Regarding Claims 19, 20, 22 and 34, it is unclear whether Sc and rare earth elements are subject to the weight requirement of 0.0 to 0.7%. It is unclear whether yttrium is considered to be a rare earth element for the purposes of these claims.
6. Regarding Claims 19, 20, 22, and 34, it is unclear whether these claims permit the complete absence of aluminum and yttrium (and/or Sc and rare earth elements) by use of the notation "0.0".
7. Regarding Claim 28, it is unclear what is meant by the phrase "claims 27". Is a claim missing or should the phrase be "claim 27"? An analogous rejection applies to Claim 29.
8. Regarding Claim 29, it is unclear what compositions are being described by these substrate abbreviations. It is unclear whether these compositions, being commercially based, are subject to change.

9. Regarding Claim 33, it is unclear what is meant by the phrase "claimed in 32".

Should it read "claimed in Claim 32"?

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Tokyo Shibaura Electric (TSE) JP 49-040239. TSE teaches applying protective layers comprised of Fe/Cr/Si/Al on gas turbine substrates, which would be expected to be metallic, wherein the claimed amounts of chromium and silicon are exemplified. See TSE (Abstract; Claim 1; Table 1, including Example 3; and entire document). TSE does not exemplify coatings having the claimed amounts amount of aluminum, but suggests that complete omission of aluminum and amounts of 1 percent aluminum are permissible. It would have been obvious to

one of ordinary skill in the art at the time of the invention to fabricate the compositions of TSE with an absence of aluminum, with 1% aluminum, or with amounts close to zero, thereby meeting the claimed compositions, since an absence of aluminum and amounts as much as 1 percent are taught as being within the knowledge of one of ordinary skill in the art. With respect to Claim 21, it would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the compositions of TSE within the ranges of Cr and Si taught as effective, including those claimed.

13. Claims 22-26 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokyo Shibaura Electric (TSE) JP 49-040239 in view of Applicant's Admissions. TSE is relied upon as above. TSE does not teach specific substrates as claimed. Applicant's Admissions teach applying MCrAl type coating layers on superalloy substrates. See Applicant's Admissions (paragraphs 3-11 of Specification). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the coatings of TSE on conventional superalloy substrates, including iron-based, as Applicant's Admissions teach that coatings of this class are effective for protecting such substrates. Due to the high concentrations of iron in the protective layer and in the iron-based substrate, it would be expected that ferritic phase would develop upon oxygen exposure when a coated, iron-based superalloy substrate is used.
14. Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokyo Shibaura Electric (TSE) JP 49-040239 in view of Applicant's

Admissions in further view of Lau EP 1 122 329. TSE in view of Applicant's Admission is relied upon as above. TSE in view of Applicant's Admissions may not teach the claimed layer thickness. Lau teaches that MCrAl coatings possessing claimed thickness confer good protection. See Lau (paragraphs 38-42). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the protective layer of TSE at varying thicknesses on the order of a fraction of a millimeter in order to optimize protective performance while minimizing material usage, thereby obtaining the claimed broad range. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the coating according to thickness suggested by Lau in order to confer favorable corrosion protection since the alloy type of Lau and of TSE in view of Applicant's Admissions are comparable.

TRANSLATION

15. A translation of JP 49-040239 has been ordered from Translations Branch.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone

Art Unit: 1794

number for the organization where this application or proceeding is assigned is 571-273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael La Villa/
Michael La Villa
Primary Examiner, Art Unit 1794
21 June 2008